

ABSTRACT OF THE DISCLOSURE

A microcavity OLED device comprising (a) a substrate; (b) a bottom-electrode layer disposed over one surface of the substrate; (c) an organic EL element disposed over the bottom-electrode layer; and (d) a top-electrode layer disposed over the organic EL element; wherein one of the electrode layers is semitransparent and reflective and the other one is essentially opaque and reflective; and wherein the thickness of the semitransparent electrode layer and the relative location of the light emitting layers are selected to provide a luminance output of the microcavity OLED device at least 1.25 times that of a similar top-emitting OLED device or at least 1.75 times that of a similar bottom-emitting OLED device using similar OLED materials and having a transparent electrode in place of the semitransparent electrode. A high-index absorption-reduction layer may also be included next to the semitransparent electrode layer outside the microcavity to further improve the performance of the microcavity OLED device.